

FORM  
2

Rev  
05/22

# State of Colorado Oil and Gas Conservation Commission

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Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

403320923

**(SUBMITTED)**

Date Received:

02/17/2023

## APPLICATION FOR PERMIT TO

Drill  Deepen  Re-enter  Recomplete and Operate

Amend

TYPE OF WELL OIL  GAS  COALBED  OTHER: \_\_\_\_\_

Refile

ZONE TYPE SINGLE ZONE  MULTIPLE ZONES  COMMINGLE ZONES

Sidetrack

Well Name: Hen Well Number: 12NHS  
Name of Operator: PDC ENERGY INC COGCC Operator Number: 69175  
Address: 1775 SHERMAN STREET - STE 3000  
City: DENVER State: CO Zip: 80203  
Contact Name: Ally Ota Phone: (303)860-5800 Fax: ( )  
Email: regulatory@pdce.com

### FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

#### COGCC Financial Assurance

The Operator has provided or will provide Financial Assurance to the COGCC for this Well.

Surety ID Number (if applicable): 20160047

#### Federal Financial Assurance

In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)

Amount of Federal Financial Assurance \$ \_\_\_\_\_

### WELL LOCATION INFORMATION

#### Surface Location

QtrQtr: SWNE Sec: 8 Twp: 4N Rng: 64W Meridian: 6

Footage at Surface: 2249 Feet FNL 2043 Feet FEL

Latitude: 40.327960 Longitude: -104.572340

GPS Data: GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP Date of Measurement: 10/14/2020

Ground Elevation: 4779

Field Name: WATTENBERG Field Number: 90750

Well Plan: is  Directional  Horizontal (highly deviated)  Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

#### Subsurface Locations

Top of Productive Zone (TPZ)

Sec: 8 Twp: 4N Rng: 64W Footage at TPZ: 2517 FSL 697 FEL  
Measured Depth of TPZ: 7315 True Vertical Depth of TPZ: 6943 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 8 Twp: 4N Rng: 64W Footage at BPZ: 1319 FSL 2440 FEL
Measured Depth of BPZ: 23255 True Vertical Depth of BPZ: 6813 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 8 Twp: 4N Rng: 64W Footage at BHL: 1319 FSL 2440 FEL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELD Municipality: N/A

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of § 24-65.1-108 C.R.S.? Yes

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas Location.

SB 19-181 provides that when "applying for a permit to drill," operators must include proof that they sought a local government siting permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I) (A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? [X] Yes [ ] No

[X] If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location.

The disposition of the application filed with the Relevant Local Government is: Approved Date of Final Disposition: 03/17/2022

Comments: 1041WOGLA21-0007 CDP is approved

SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION

Surface Owner of the land at this Well's Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Mineral Owner beneath this Well's Oil and Gas Location: [X] Fee [ ] State [ ] Federal [ ] Indian

Surface Owner Protection Bond (if applicable): Surety ID Number (if applicable):

MINERALS DEVELOPED BY WELL

The ownership of all the minerals that will be developed by this Well is (check all that apply):

- [X] Fee
[X] State
[ ] Federal
[ ] Indian
[ ] N/A

LEASE INFORMATION

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

\* If this Well is within a unit, describe a lease that will be developed by the Well.
\* If this Well is not subject to a unit, describe the lease that will be produced by the Well.
(Attach a Lease Map or Lease Description or Lease if necessary.)

T4N-R64W Section 8: NE1/4

Total Acres in Described Lease: 160 Described Mineral Lease is: [X] Fee [ ] State [ ] Federal [ ] Indian

Federal or State Lease #

**SAFETY SETBACK INFORMATION**

Distance from Well to nearest:

Building: 981 Feet  
 Building Unit: 1348 Feet  
 Public Road: 2032 Feet  
 Above Ground Utility: 1482 Feet  
 Railroad: 5280 Feet  
 Property Line: 390 Feet

**INSTRUCTIONS:**

- Specify all distances per Rule 308.b.(1).
- Enter 5280 for distance greater than 1 mile.
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.
- Building Unit – as defined in 100 Series Rules.

**OBJECTIVE FORMATIONS**

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR	407-3328	3770	S.4: S2S2S2, S.5: S2S2SE, S.7: SESESE, S.8: E2, S2S2SW, S.9: All, S.16: All, S.17: All, S.18: E2E2E2, S.20: All, S.21: All

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

**SUBSURFACE MINERAL SETBACKS**

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 200 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 181 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: \_\_\_\_\_ Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: \_\_\_\_\_ Feet

**Exception Location**

If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers. \_\_\_\_\_

**SPACING & FORMATIONS COMMENTS**

**DRILLING PROGRAM**Proposed Total Measured Depth: 23255 FeetTVD at Proposed Total Measured Depth 6813 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: 22 Feet  No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If yes, attach an H<sub>2</sub>S Drilling Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? NoWill salt sections be encountered during drilling? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? YesBOP Equipment Type:  Annular Preventor  Double Ram  Rotating Head  NoneBeneficial reuse or land application plan submitted? No

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

**CASING PROGRAM**

<u>Casing Type</u>	<u>Size of Hole</u>	<u>Size of Casing</u>	<u>Grade</u>	<u>Wt/Ft</u>	<u>Csg/Liner Top</u>	<u>Setting Depth</u>	<u>Sacks Cmt</u>	<u>Cmt Btm</u>	<u>Cmt Top</u>
SURF	13+1/2	9+5/8	J-55	36	0	1600	920	1600	0
1ST	8+1/2	5+1/2	P-110	20	0	23255	2035	23255	2400

 Conductor Casing is NOT planned**POTENTIAL FLOW AND CONFINING FORMATIONS**

<u>Zone Type</u>	<u>Formation /Hazard</u>	<u>Top M.D.</u>	<u>Top T.V.D.</u>	<u>Bottom M.D.</u>	<u>Bottom T.V.D.</u>	<u>TDS (mg/L)</u>	<u>Data Source</u>	<u>Comment</u>
Groundwater	Fox Hills Sandstone	490	490	878	878	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	928	928	975	975			
Groundwater	UPIR/Pawnee Aquifer	975	975	1490	1490	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1490	1490	3680	3680			
Hydrocarbon	Parkman	3680	3680	3980	3980			
Confining Layer	Pierre Shale	3980	3980	4095	4095			
Hydrocarbon	Sussex	4095	4095	4498	4498			
Confining Layer	Pierre Shale	4498	4498	4930	4930			
Hydrocarbon	Shannon	4930	4930	5002	5002			
Confining Layer	Pierre Shale	5002	5002	6806	6663			
Subsurface Hazard	Sharon Springs Shale	6806	6663	6832	6684			
Hydrocarbon	Niobrara	6881	6722	23255	6813			

**OPERATOR COMMENTS AND SUBMITTAL**

Comments



## Best Management Practices

<b>No</b>	<b>BMP/COA Type</b>	<b>Description</b>
1	Drilling/Completion Operations	Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling.
2	Drilling/Completion Operations	OPEN HOLE LOGGING EXCEPTION: One of the first wells drilled on the pad will be logged with cased-hole neutron log with gamma ray log from the kick-off point into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. The Form 5, Completion Report, for each well on the pad will list all logs run in that well and have those logs attached. The Form 5 for each well shall state "Open Hole Logging Exception - No open-hole logs were run" and shall clearly identify the type of log and the well (by API #) in which open-hole logs were run.

Total: 2 comment(s)

### Attachment List

<b>Att Doc Num</b>	<b>Name</b>
403321812	OffsetWellEvaluations Data
403322083	OPEN HOLE LOGGING EXCEPTION
403322085	DEVIATED DRILLING PLAN
403322089	DIRECTIONAL DATA
403324644	WELL LOCATION PLAT

Total Attach: 5 Files

### General Comments

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
		Stamp Upon Approval

Total: 0 comment(s)